LABORatorio R. Revelli
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Employment performance and labor market segmentation in Europe and USA: preliminary explorations

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1. Introduction

The European (un)employment problem has inspired millions of printed pages. The consensus view emerged since the Eighties (and still popular today) is that employment growth in Europe can be achieved only to the extent that labour market flexibility will increase in parallel. Since the Nineties a vast share of new hirings has taken the form of fixed time or temporary contracts, part-time positions, disguised forms of self-employment, work leasing, atypical contracts of various sorts. An increasingly important issue is, therefore, whether it is possible to have flexibility and sound employment growth, without bearing the high social and economic costs associated to labor market flexibility.

This study is a preliminary exploration on the extent of labor market segmentation in Europe and the United States, based on data of earnings mobility prepared for the OECD in the late Nineties. This is an important issue for a balanced view on the pros-and-cons of labor market flexibility.

The punch-line of this paper is that the USA and continental Europe differ in two respects: (i) upward and downward earning mobility of the relatively better off-fraction of the work-force is higher in the USA than in the European countries; (ii) labor markets segmentation in the low tail of the earning distribution is higher in the USA than in continental Europe. The Scandinavian countries are even more distant from the USA….

The paper is organized as follows: par. 2 defines labor market segmentation (LMS). The methodology of this approach is illustrated, and the main results presented. Par. 3 discusses two alternative indicators of LMS and provides a rationale for the U-shaped relation which is found between LMS and indicators of employment performance. Par. 4 concludes with an overview of open issues.

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[1] This is a revised version of a study that dates back to 1998. Most of the revisions have been written while visiting the Institute for Industrial and Labor Relations, Princeton University in the spring of 2000, where I was given very generous hospitality. I have benefited from comments received after presentations of this version at Princeton and the IMF, Washington, D.C. , and of the previous version at Torino, Padova and Aarhus. In particular, I wish to thank O. Ashenfelter, T. Atkinson, G. Bertola, U. Colombino, H. Farber, R. Freeman, M. Guell, W. Salverda, and U. Trivellato. This research has been carried out also thanks to a grant by MURST (1999).

2. Earnings mobility and labor market segmentation

Earnings inequality is reported to have risen in several OECD countries in the last twenty years.[2] Increasing pay inequality naturally leads on to the question of earnings mobility, for it matters whether particular individuals or groups are trapped in low-paid segments of the labour market or whether low pay is a transient phenomenon.[3] Increasing inequality may lead into low-pay persistence unless the possibility of enhancing one's human capital is guaranteed for all workers, either via public investment in education and training, or via private channels with finance made available to the more endowed as well as to the less endowed workers.

The idea of labor market segmentation was introduced by M. Piore and P. Doeringer ( ) in the early 70's; it was successfully used by various Cambridge-Italian economists (…) to describe the working of Italy's labour market, where, parallel to the official economy, there were thriving black/grey/unobserved manufacturing activities based on work-at-home and cottage industry-type establishments. J. McDonald and R. Solow ( ) modelled the wage setting in a dual economy with a primary unionised sector and a fully competitive secondary sector. B. Contini and M. Galeotti (1986) suggested a dynamic model of inflation and LMS in the vein of W. Baumol's well known Scandinavian two-sector model ( ). W. Dickens and Lang ( ) provided an empirical framework for testing the main hypotheses of LMS, followed by A. Brandolini, P. Cipollone and P. Sestito ( ) who applied it to the Italian economy.

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[2] Among others: P. Gottschalk and T.M. Smeeding, "Cross-national comparisons of earnings and income inequality", Journal of Economic Literature, vol.XXXV, 1997.

[3] Here we deal with intra-generational earnings mobility. Sociologists are usually more interested in social mobility, i.e. inter-generational mobility, an argument that would deserve a lot more of attention also by economists.

The leading ideas of LMS were at the bases of all the contributions of the LOWER network on low-pay in Europe since the mid Nineties (and). The low-paying industries, employing work-force with many of the characteristics attributed to the secondary segments by the LMS literature, are found to be quasi universal: agriculture, retail trade, hotels and catering, personal services. Low wages relate more to industry than personal characteristics, while the opposite applies to high wages.

Here I define labor market segmentation (LMS) in terms of earnings mobility, i.e. as a dynamic situation in which coexist a large share of workers stuck for long periods in low pay (bad jobs or no job at all), and, at the same time, a vast segment of working population that is very mobile, upwards or downwards, within one's own working life or across generations. Mobility between the two segments is limited. Thus, persistence in low pay is necessary, but not sufficient for labor market segmentation, as defined here. Other forms of LM-segmentation in terms of earnings mobility are quite conceivable, for instance, one in which immobility prevails everywhere in the earnings distribution: the poor stay forever poor, the rich forever rich, no matter what they do. Examples might be drawn from the Middle Age-economies, with landlords on one side, and serfs on the other, or - even today - from some Latin American or Asian countries run by ruthless authoritarian regimes. Hopefully, such examples should not be with us in the western world.

The features of earning mobility can be explored on the bases of transition matrices gathered by OECD. The OECD data relate to earning mobility of dependent workers in the 1985-91 period, with the exclusion of self-employment, the public sector and agriculture.
There are three data sources: household surveys of individual workers (USA, Germany); establishment surveys yielding also worker histories (UK); administrative data-bases (Italy and France, both from Social Security archives). Administrative sources usually cover the whole population (as in France) or very large random samples (as in Italy, where the sampling ratio is 1:90).
I have used the full (6 x 6) matrices - the states being the five income brackets around the median + one state corresponding to "part-time work".[4] Comments will be confined to the earnings mobility of full-time wage and salary workers only, as this is the only easy way to insure comparability.
If the lifetime earning profile of a dependent worker were completely predetermined, she/he would be trapped in the same relative position of the wage distribution where he/she began his/her career. As a consequence, all transition probabilities P(s,s), for

[4] Here and in what follows I will refer to transitions across earning bands around the median, as defined by the OECD. There is a strong methodological drawback in making use of transitions across percentiles (deciles). It can be proved (Revelli, 1997) that, under rather general conditions on the underlying model of individual wage growth, the transition probabilities across percentiles of the earning distribution are independent from the variance of the process. This annihilates almost all of the expected differences among countries, thus making comparisons quite difficult.

any state s = 1,2 ... S, would be equal to 1, even if individuals differed at the beginning of their career. Likewise any immobility indicator would be equal to 1. If segmentation is a relevant issue, then it becomes important to distinguish what happens at both ends of the earnings distribution. Persistence in the low tail of the distribution may or may not go hand-in-hand with persistence in the upper tail. Looking at overall immobility ratios may be very misleading , as it averages out differences where they should instead emerge[5].

A simple method to pursue this line consists in contrasting two immobility indicators, one computed in a partition of North-West cells of the transition matrix (denoting persistence in low earnings), the other in a partition of South-East cells (denoting persistence in high earnings). I have chosen to contrast the probability P(1,1) of persisting in the first earning band (less than 0.65 * median) in the five-year period 1986-91[6], with a standard immobility index (IM2) calculated from the diagonal in the remaining (4 x 4) matrix.

IM2 is defined as: $IM2 = [P(2,2) + P(3,3) + P(4,4) + P(5,5)] / 4$.

The following results are obtained[7] (F1 – in the third column of Table 1 - stands for the share of low-paid workers on all full-time employees in 1986).

[5] The standard immobility ratio calculated from OECD 1986-91 data yield the following results:

France	0.72	UK	0.63
Germany	0.70	USA	0.64
Danmark	0.62	Italy	0.66

which look all but particularly evokative. For instance, Denmark and USA look almost identical, while - as will be clear in what follows - they are very different.

[6] An additional problem, in connection with the measurement of persistence in low pay, is how to treat people who have no wage. There is quite a high turnover from one year to the next between those at the bottom of the wage distribution and the unemployed (the low-pay no-pay cycle). The measures of P(1,1) – persistence in low pay - utilized in this paper, refer to individuals who are at work both in 1986 and in 1991, regardless of their position in between. Those who have become unemployed sometime after 1986 and are still unemployed in 1991 are not accounted for. I have chosen to leave them out altogether (to improve cross-country comparability), although, in a few cases, the information could have been retrieved. My choice is justified by the fact that here I deal with persistence in low pay, and not persistence in low income.

[7] A distance (Euclidean metric) between the transition matrices may also be computed. This too hides the contrast found between mobility and labor market segmentation. It yields the following matrix of distances, which confirms the ranking with the USA and Germany/Italy at the opposite extremes:

	USA	FR	IT	UK	GER
USA	0	0.023	0.026	0.013	0.024
FR		0	0.008	0.013	0.006
IT			0	0.015	0.007
UK				0	0.014
GER					0

Table 1 Indicators of immobility and segmentation

	All workers			male			Female		
	P(1,1)	IM2	F1	P(1,1)	IM2	F1	P(1,1)	IM2	F1
USA	55.8	42.5	27.5	45.4	41.3	16.7	62.5	43.0	42.2
FR	31.6	62.9	11.0	22.7	62.2	7.9	39.7	63.3	39.8
IT	21.8	60.8	10.0	15.7	60.5	6.9	27.9	59.2	16.1
UK	39.0	50.2	17.7	29.2	49.6	9.5	45.6	52.7	34.6
GER	26.0	61.3	18.7	15.4	61.4	10.7	33.7	58.6	35.9
DNK	8.1	56.8	6.0	6.5	55.9	3.6	9.0	52.8	9.6
FIN	36.9	47.9	14.3	42.1	47.3	10.7	33.5	42.9	18.3
SWE	15.4	65.5	4.2	9.1	63.0	2.6	20.0	70.0	7.7

One contrast is immediately clear: while P(1,1) is much higher for the USA than for the European countries, IM2 is instead lower.
Gross as IM2 may be, it unequivocally points at the fact that upward and downward mobility is higher in the USA for all, except for the least fortunate earners. For the latter, instead, the chance of improving their relative position is very slim in the USA, and somewhat better in Europe. The contrast between P(1,1) and IM2 strongly suggests the existence of labour market segmentation.
The extent of segmentation in the USA is shown also by the fraction of low-paid workers in the 1986-wage distribution (F1): 27.5% of the USA full-time dependent workers earn less than 0.65*median, six times the corresponding fraction of Sweden and Denmark, two-and-a-half times that of France and Italy, one-and-a-half times that of Germany and the U.K. The figure for Germany may look surprisingly high, but it is not: German youth – at least until reunification - entered employment at the end of the dual education and training system at low entry pay, but destined to catch up in few years. Interestingly, F1 of female workers is comparable, except for Italy: here the difference is due to the scarce diffusion of part-time work, and, consequently, the lower female partecipation.
These results are not independent from the dispersion of the earnings distributions, which differs widely from country to country. Take, for example, the Swedish record of enormous compression of relative wages under centralized "solidarity" bargaining (broken down only in the mid Nineties): in the Eighties the Swedish hourly wage distribution was so dense that a relative wage increase of 30% was enough to carry a worker from the lowest decile of the blue-collar distribution all the way to the highest. A parallel move in the U.K. would have required a relative increase of more than 200%, and for a US manufacturing employee over 400%.[8]

[8] D.A.Hibbs and H. Locking, JOLE, Oct. 2000,

2.2 A closer inspection by age-group

Table 1 may raise doubts on the grounds that the earnings transition matrices for all age groups pooled together, as those utilized above, may hide composition effects: transition probabilities of young workers differ substantially from those of adult and aged people. Unless the age distribution of the sample populations is pretty much the same in all countries under observation, the indications of table 1 could be distorted. As tab. 2 shows, the age distributions are indeed quite different. Two distributions are displayed here: that of full-time wage and salary workers (FTW), and that of the whole OECD samples (ALL). The two may differ if the original sample is one of workers only (as in Italy, France and UK) or if it is representative of a population less restrictively defined (as in USA and Germany).

Table 2
Age distribution (1986) of full-time wage and salary workers (FTW) and of the complete sample populations (ALL)

	USA		ITA		FRA		U.K.		GER	
age groups	FTW	ALL	FWT	ALL	FWT	ALL	FWT	ALL	FWT	ALL
< 25	10	11	23	30	17	29	22	24	22	20
25-34	30	26	29	27	33	29	24	24	25	21
35-49	40	37	36	31	33	29	33	34	34	32
50-64	20	26	12	12	17	13	21	18	19	27
	100	100	100	100	100	100	100	100	100	100

I have, therefore, gone back to the transition matrices for four different age groups, and recomputed the equivalent of table 1 as follows:

Table 3

age	15-24				25-34				35-49				50-64				//
	P (1,1)	IM2	F2		P (1,1)	IM2	F2		P (1,1)	IM2	F2		P (1,1)	IM2	F2		F2 all
usa	47.9	27.0	27.2		40.4	42.9	17.7		61.6	42.7	13.2		59.9	36.0	6.8		15.4
fra	18.0	34.2	8.0		26.4	53.7	6.0		27.5	61.6	3.9		30.3	57.3	5.3		5.9
ita	13.1	39.2	13.2		21.4	55.4	6.1		32.7	63.3	5.0		44.7	62.7	6.0		7.9
uk	23.6	35.8	21.3		35.6	44.8	5.8		47.6	52.9	12.8		55.4	49.4	8.0		9.8
ger	16.7	31.8	27.7		16.7	54.1	5.6		41.5	63.8	3.2		73.7	19.3	2.6		8.3
fin			19.1				10.4				8.0				6.4		11.4
dk			11.2				3.1				1.2				0.8		3.6

The wage distributions 1986 and 1991 from which I derive table 3 are the original distributions for all age groups together, and not the distributions specific of each age group. If such were not the case, little could be said to either strengthen or weaken our previous conclusions. Age-specific transition matrices would not reveal that persistence in low pay, described by P(1,1), is increasing in age in all the European countries (less so in the USA), an indication that mobility, higher at young age,

decreases as life goes on. The new indications are very similar to those seen already. As before, and in all but the oldest age group, P(1,1) - stickiness in low pay - is much higher in the USA than in the European countries, while IM2 - the complement of which (1 - IM2) denotes mobility outside the low-pay end of the earnings distribution - is instead lower. Among the European countries, the U.K. looks, here again, the closest to North America. Evidence of labor market segmentation in the USA, compared to continental Europe, is strongly confirmed.
In the 50-64 age group Germany is the exception: persistence is higher at the bottom of the distribution, while there is a lot more mobility in the remaining portion. In Germany, however, F2, the 1986-share of people in low pay, is only 3.2 at age 35-49, and 2.6 at age 50-64, much lower than in the remaining countries. I shall return to the case of Germany in the next paragraph.

3. LABOR MARKET SEGMENTATION AND EMPLOYMENT PERFORMANCE

In order to investigate the relation between labor market segmentation and the macroeconomy, it is useful to have a scalar indicator of LMS.
I propose here two very simple, alternative, indicators:

(1) $s1 = P(1,1) - IM2$

(2) $s2 = P(1,1) / IM2$

where P(1,1) is the probability of persistence in the low tail of the earnings distribution, however defined, and IM2 an immobility indicator in the upper tail (the rest) of the distribution, hence itself an average of persistence probabilities. Both P(1,1) and IM2 are bounded between 0 and 1.
Let us then see how s1 and s2 behave in different scenarios. There are two polar cases of no-segmentation, never even approached by the countries under observation:

1 Perfect immobility in the whole earnings distribution (IMM): the transition matrix is equal to the identity matrix. Both P(1,1) and IM2 = 1; s1 = 0 ; s2 = 1;

2 Perfect mobility (MOB): all the elements of the transition matrix are identical, and equal to 1/n (where n is the number of states). Here too s1 = 0 ; s2 = 1.

Next, we have two scenarios, denoting polar and opposite configurations of the labor market, only one being a stable configuration:

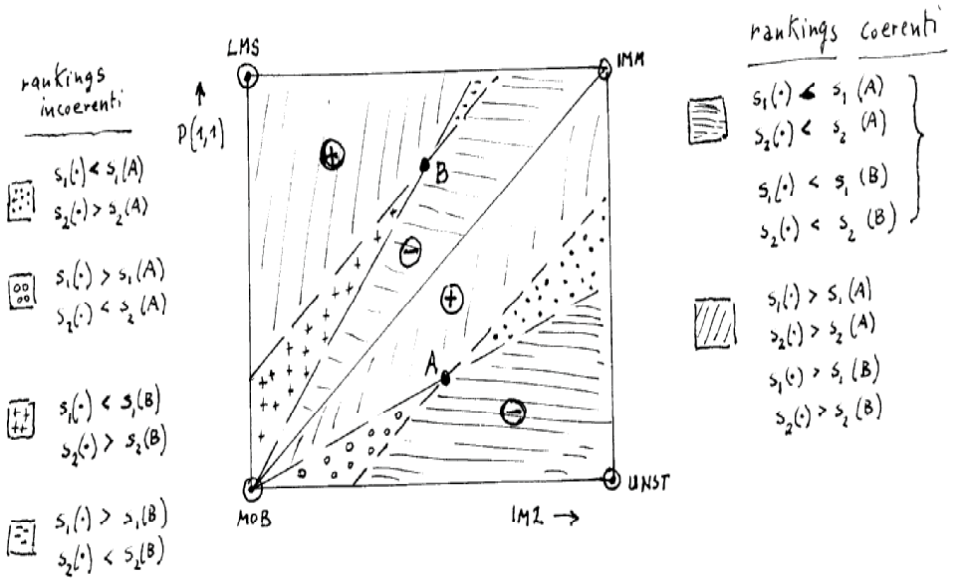
3 LMS, characterized by perfect immobility in the low tail of the distribution and perfect mobility in the rest of the distribution: thus, P(1,1) = 1 and IM2 = 0. Here s1 = 1 and s2 $\rightarrow$ oo

4 UNST, represents a theoretical opposite extreme: perfect mobility in the low tail, i.e. zero persistence in low-pay - P(1,1) = 0 - and perfect immobility in the rest of the earnings distribution, i.e. IM2 = 1. In fact, this configuration is unstable, as it collapses in one transition into a version of IMM, differing from the previous one in that the support of the distribution is shifted to the right: anyone in the low tail of the distribution immediately reaches any other state above the low-tail threshold (not necessarily with equal probability). Here s1 = - 1 and s2 = 0.

Thus s1 varies between -1 and +1, while s2 varies between 0 and oo, both increasing with the extent of labor market segmentation [LMS].

Both s1 and s2 fail to distinguish whenever P(1,1) = IM2, for instance the two polar cases of IMM and MOB, where P(1,1) and IM2 are equal to each other and take value 1 and 0 respectively. More generally, s1 takes the same value for different pairs [P(1,1), IM2] along iso-lines parallel to the main diagonal of fig. X. Instead s2 takes the same value for pairs [P(1,1), IM2] along rays originating in (0,0), as in fig. Y.[9] This may not be too a serious drawback for the purpose of preliminary investigation: none of the polar cases are ever approached in our sample countries, with P(1,1) and IM2 always distant from their extreme values 0 and 1.

[9] s1 and s2 yield different rankings of LMS, as shown below. The properties of each of the two indicators will have to be investigated in more detail at a later stage figure Z.



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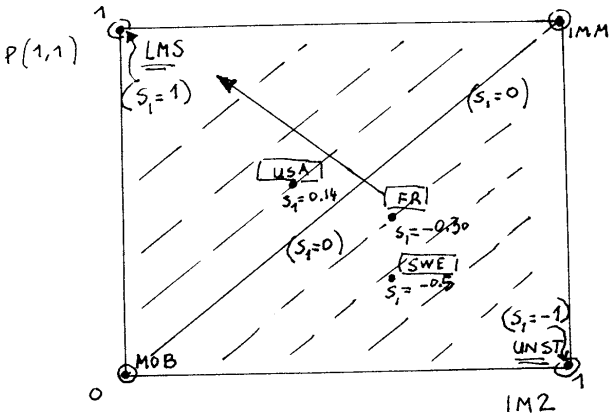
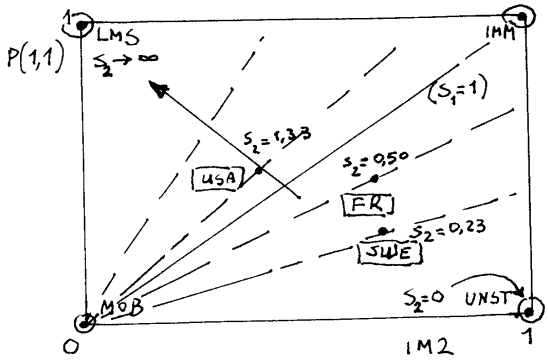




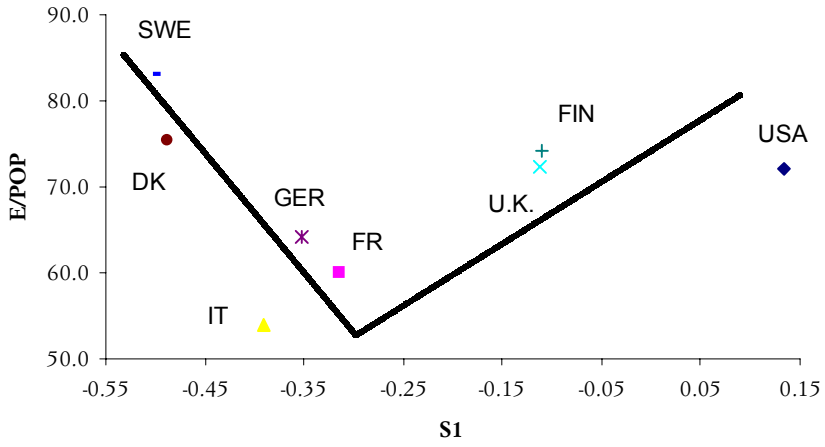
Case studies on low-pay persistence[10] indicate that P(1,1) is quite stable in the business cycle; so is any immobility indicator, and hence also IM2. Aside from measurement error, s1 and s2 should, therefore, be stable indicators of LM-segmentation. In what follows I contrast the extent of labor market segmentation (measured by either s1 or s2) with a stable catch-all indicator of labor market performance, the employment to population ratio (E/POP).

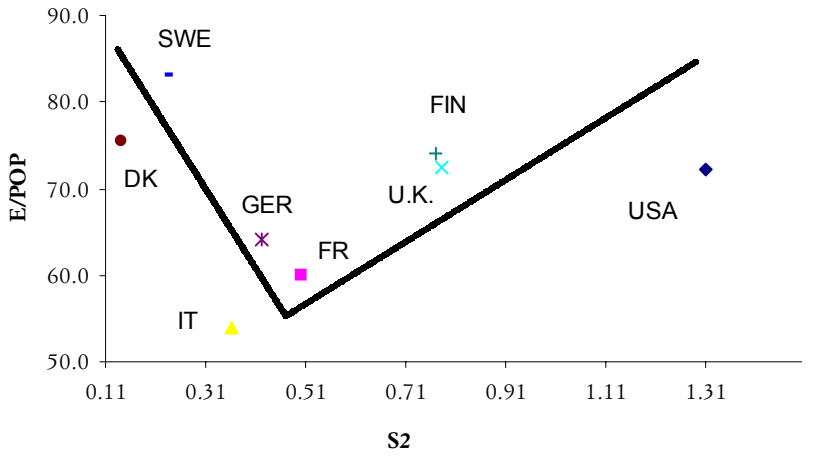
[10] See: W. Salverda, S. Bazen and M. Gregory, The European-American Employment Gap, Wage Inequality, Earnings Mobility and Skill, LOWER Report, June 2001, and also previous LOWER (European Low-Wage Employment Research Network) publications.

Figura

A quick look - on a cross-sectional sample of eight countries - suggests a U-shaped relation, with E/POP high in correspondence with high and low levels of LMS, and low in correspondence of intermediate LMS. The same configuration emerges if s2 is used instead of s1.

Disegno 2 U-shaped E/POP





	P(1,1)	IM2	s1	s2	E/POP	ELMP/GDP
USA	55.8	42.5	0.133	1.31	72.2	0.5
FRANCE	31.6	62.9	- 0.313	0.50	59.9	3.2
ITALY	21.8	60.8	- 0.390	0.36	53.9	2.5
U.K.	39.0	50.2	- 0.112	0.78	72.4	2.6
GERMANY	26.0	61.3	- 0.353	0.42	64.1	3.8
DENMARK	8.1	56.8	- 0.487	0.14	75.4	6.6
FINLAND	36.9	47.9	- 0.110	0.77	74.1	5.6
SWEDEN	15.4	65.5	- 0.501	0.23	83.1	5.5

The suggestion that E/POP and LMS may be simultaneously determined in a stylised model is strong. A preliminary explanation (that may lead, in a later stage, to the construction of such a model) *requires to identify an exogenous variable that shapes both the labor supply of the "weak" segments of the labor force ("weak" being the young unskilled, the old, and eventually the women in countries of Southern Europe), as well as the extent of labor market segmentation. There is a natural candidate for this, and it is the extent (quantity and quality-wise) of the welfare institutions.*

For simplicity, consider three different sets of countries: group A, typified by the Scandinavian area, where the welfare state has a long tradition of efficiency and generosity for all citizens; group B, exemplified by countries of Southern and continental Europe, where the welfare system is less generous and more selective in its target groups (here it is not important to identify which groups may benefit more than others). The third group, C, includes countries where the welfare state is historically weak (as in USA) or where it has lost much of its pervasive nature (UK).

In each group the extent of labor market segmentation is inversely proportional to the generosity of the welfare system. This is self-explanatory and does not need much justification. Where the safety network provided by the institutions is weak, poverty persistence arises as a most serious problem. Mobility may be high in the upper tail of the earnings distribution, but fails to reach the extreme fringes of the labour market.
The relation between welfare and labour supply requires, instead, some elaboration. I assume that prime-age work-force is all at work at some equilibrium wage (partecipation rates among prime-age men are equally high in all countries: HERE THE DATA !). The labour supply of the "secondary" component of the work-force takes the following form:

$$Ls = \begin{cases} 0 & \text{for } w < wr(W) \\ a + b(W) & \text{for } w > wr(W) \end{cases}$$

where $wr'(W) > 0$; $b'(W) < 0$.

The reservation wage (wr) of the secondary segment of population, below which labour supply is zero, is a function of the generosity and pervasiveness of the welfare state [W] (wr is often set equal to the unemployment benefits): highest in group A, and lowest in group C. In addition, and reinforcing the previous argument, the degree of wage inequality in the three groups of countries impacts on the difference between the reservation wage (wr) and the equilibrium wage of the primary segment: the difference will be relatively small in group A, somewhat larger in group B, and very substantial in group C. The wider the group fully protected by W, the larger the number of potential workers willing to take a job at a wage immediately above wr. The slope b(W) is, instead, a decreasing function of W, i.e. it depends on the amount of need: in all three groups of countries the wage level attained in the secondary segment is at least as high as the reservation wage . We observe, in fact, that the number of people at work in the non-prime-age segment of the population is very high in countries of groups A and C, and relatively lower in countries of group B.

Three graphs here

Thus, in group A countries with robust welfare institutions, high expenditure in ALMP and low wage inequality – typified by Scandinavia - LMS is at its lowest and E/POP at its highest: services are provided by the State to working mothers with children, youth and potentially active aged people, in the form of nursery schools, youth housing, generous support to school-to-work transitions and retraining programs at all ages, active labor market instruments aimed at putting the unemployed back to work.

In group B countries - much of continental and Southern Europe - the welfare institutions are not as rooted in the tradition, and their generosity does not match that of the Scandinavian countries. With wage inequality being higher, some LMS (as defined here) appears, and E/POP is lower as some potential workers (women and aged people) cannot "afford" to be at work.[11]

Finally, there are countries – group C, of which the USA is the obvious example - with high income inequality, highly deregulated labor markets, and low employment protection. Here poverty persistence is a more serious problem. Mobility is high in the upper tail of the earnings distribution, but fails to reach the extreme fringes of the labor market. The impact of ALMP is of shorter duration; seldom do they yield the desired long-run effects for which they have often been enacted. Structural reforms with strong and long-lasting redistributional effects are costly and basically out of

[11] Studies of the LOWER network (1999 and 2000) document that poverty persistence is quite common in Europe, and touches fringes of the population that have surprisingly similar characteristics (examples----).

reach. In fact, they may be inefficient instruments also from a "political economy" point of view: reforms are aimed at population segments that "pay" in political terms, i.e. that will vote in favour of the party that supports the reforms. The degree of political partecipation of the marginal fringes of the LM is often low and unreliable. Political absenteeism is widespread. As a consequence, polarization takes hold, and segmentation becomes a natural outcome. In such countries almost everyone is forced to be at work, including aged people who cannot live on public pensions: many hold "bad" jobs that carry low pay, no benefits, high risk of sudden termination. Thus E/POP is high, because the safety networks are insufficient, segmentation creeps in, with the less endowed unable to escape the vicious low-pay no-pay cycle. LMS becomes pervasive.

4. Conclusions

In this paper I propose a very simple framework for the analysis of labor market segmentation. The main conclusion is deceptively simple: where the employment rate is high, the extent of labor market segmentation depends on the generosity and efficiency of the welfare state. It is destined to be high if the safety networks are insufficient. In countries with less pervasive welfare institutions, the employment rate will not attain such high levels as in countries where the same institutions are either much weaker, or much stronger.

Much more work, both empirical and theoretical, remains to be done in order to have a neat picture of how employment and segmentation interact. I briefly mention, to conclude, some of the problems that will have to be addressed in the next future.

1 There might be a subtle problem in some EU - countries, especially of Southern Europe: here labour market segmentation may hide in the black economy, which develops for many reasons: as a reaction to tight regulation and high taxation, but also as a consequence of a fragile industrialization: small, local producers of traditional, highly labor-intensive consumer goods find it easier to fight the competition of developing countries by cutting labor-related costs (including the elusion of safety regulations, and using child labor), rather than innovating and upgrading the quality of their products. Thus in the black economies of countries like Italy, Spain, Greece (and others too), there exist many jobs that official statistics fail to catch altogether [12]. A vast majority of them are "bad" jobs, with no perspectives of

[12] One well known problem with Italy's Labour Force Survey is that black workers seldom reveal their status for fear of being identified. Is it realistic to suppose that Spanish and Greek black workers should behave very differently ? The main reason for the problem of incorrect reporting being more serious in Italy and Spain than, for instance, in USA and UK, has to do with the regulatory regime: here all jobs are legal (safe the ones linked to outright criminal activities), many low-paid jobs are

upwards mobility. If they entered the employment count, we would see a higher E/P, and, I would guess, a degree of labor market segmentation. This amounts to say that the distance between the labor markets of Southern Europe and that of the USA could be smaller than official statistics lead us to believe.

2 The increasing degree of labour market flexibility and deregulation in Europe pose additional problems *per se.* To the extent that it may be difficult to observe earnings and tenure related to many of the new flexible jobs, the measurement of earnings mobility may be distorted. A vast share of new hirings takes the form of fixed time or temporary contracts, part-time positions, disguised forms of self-employment, work leasing, atypical contracts of various sorts, all aimed at reducing labour costs and making work flexible. Do the data at hand catch all these new forms ? In some countries they probably do, but in some they certainly don't. Italy is one example, but certainly not the only one. In much of Italy there still is a cultural bias in favor of the "job for life": it may well happen that atypical, temporary jobs are not regarded as true working positions, and self-reporting at work in LFS-type surveys may be seriously downward biased. In addition, where the data originate from administrative sources some atypical forms of work may not be officially reported. This being the case, the measurement of earnings mobility is distorted, with all likelihood in the direction of underestimating persistence in low pay and overestimating upwards mobility.

In addition, there are reasons to believe that the extent of labor market segmentation may be increasing:

3 policies aiming at helping entry of youth into employment. Payroll tax rebates, lower firing costs (both come together with fixed duration - one or two-year - contracts) increase the dualistic features of the labor market as firms find it advantageous to change the mix of skilled / unskilled workforce in favor of the latter [cfr. Blanchard-Landier (2000); Boeri (1999); Contini et al. (1998)]. Worker turnover increases in parallel, and the incentives (by firms and workers) to invest in human capital will be reduced. Thus, while the "good & lucky" workers may have better chances to enhance their human capital, the "bad" ones will not. As a result, dualism - which could be, in principle, a transitory stage for the new entrants in the labor market - will consolidate into persistent segmentation.

4 the increasing pace of outsourcing in many sectors of the economy, and particularly in the new economy. The economic miracle of Silicon Valley may not be a typical story, but is illustrative of what may take place in other expansion areas, in the USA and elsewhere. Silicon Valley has probably created more wealth in a shorter time period than virtually any other place in history. But, at the same time,

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exempted from social security contributions. This effectively takes out the incentive to disclose one's status to the interviewers.

average wages for low-end workers are 10% lower than a decade ago, while living costs are 40% higher than in the rest of the US and housing prices have gone up by 65% since 1995. The key reason lies in the high tech's heavy reliance on outsourcing and subcontracting, a model that helps higher skilled workers thrive, able as they are to hop from one employer to another, jacking up their pay in every move. But for the less skilled, outsourcing only serves to hold wages down. This gives high-tech firms maximum flexibility in a fast-moving industry. It also creates a highly contingent workforce: part-timers, temporary job holders, contract (as well as illegal piece-wise) workers, and the self-employed have jumped from 19% of Santa Clara's workforce in the Eighties to 42% today (by contrast, the share of contingent workers in the US as a whole has climbed from 27% to 33% in the same period). Because the skill gap in high-tech is so vast, the less-skilled employees are likely to benefit less from the upward mobility that allows many low-skilled workers to achieve middle-class status.